Particulate Matter Workshop

Host: NIOSH

Location: Morgantown, WV

6-7 September 2005

Data Quality Objectives:

- qualitative & quantitative statements
- clarify study objectives
- define appropriate types of data
- establish the quality and quantity of data needed to support decisions

Not applicable to some problems (i.e., estimation, basic research, or objective does not select between two opposite criteria)

In such cases, a systematic planning process based on the scientific method is still required (EPA Manual 5360, July 1998)

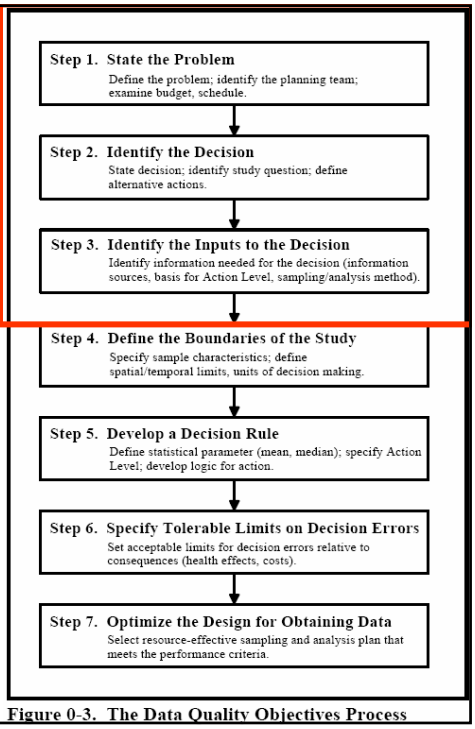


Figure 0-3. The Data Quality Objectives Process

The Problem

- *Many* deployed personnel engaged in military operations in Iraq and Afghanistan experience exposure to particulate matter, which *may* have microbial or chemical characteristics that *could* be detrimental to short-term or long-term health.

The Decision

- Does the particulate matter exposure of deployed personnel pose:
  - A significant short-term and/or long-term health risk?
  - An impact upon operational effectiveness?

Inputs to the Decision: Risk Assessment Steps

- Hazard Identification
- Dose-Response
- Exposure Assessment
- Risk Characterization

Inputs for the decision

What data [inputs] are needed for the risk determination decision?

Programmatic Framework for Data Generation

Research (experimental, knowledge)

vs.

RDT&E (technology, materiel & capabilities)

vs.

Studies and Analysis (observational, decision support)

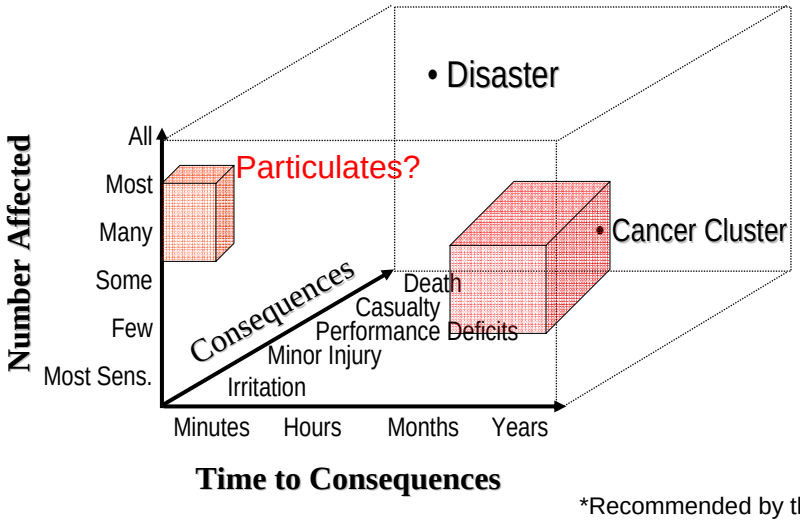
vs.

Surveillance and Monitoring

"…a systematic continuous or repetitive health-related activity designed to lead if necessary to corrective actions. Three types of monitoring are defined: **ambient**, **biological and health surveillance**." WHO

Backup Slides

Priority Setting: Dimensions of Harm*



*Recommended by the NRC

An Integrated Strategy for Prevention

(from Weeks et al.1991)